

CLAIMS

What is claimed is:

1. A method of modifying vasoactivity by regulating a soluble A $\beta$  pro-inflammatory pathway.
2. The method according to claim 1, further defined as upregulating the soluble A $\beta$  pro-inflammatory pathway.
3. The method according to claim 1, further defined as down-regulating the soluble A $\beta$  pro-inflammatory pathway.
4. A method of treating patients with vascular disease by modifying an intracellular soluble A $\beta$  pro-inflammatory pathway.
5. The method according to claim 4, wherein said modifying step is further defined as blocking target molecules of the soluble A $\beta$  pro-inflammatory pathway.
6. A pharmaceutical composition comprising an effective amount of a soluble A $\beta$  pro-inflammatory pathway regulator and a pharmaceutically effective carrier.
7. The pharmaceutical composition according to claim 6, wherein said soluble A $\beta$  pro-inflammatory pathway regulator blocks the activity of type I secretory PLA2.
8. The pharmaceutical composition according to claim 7, wherein said soluble A $\beta$  pro-inflammatory pathway regulator is a non-toxic derivative of oleyloxyethylphosphorylcholine or related compounds.

9. The pharmaceutical composition according to claim 6, wherein said soluble A $\beta$  pro-inflammatory pathway regulator blocks the activity of cytosolic PLA2.

10. The pharmaceutical composition according to claim 9, wherein said soluble A $\beta$  pro-inflammatory pathway regulator is one from the group consisting essentially of methyl arachydonyl fluorophosphonate, AACOCF<sub>3</sub>, or related compounds.

11. The pharmaceutical composition according to claim 6, wherein said soluble A $\beta$  pro-inflammatory pathway regulator blocks the activity of enzymes of the LOX family.

12. The pharmaceutical composition according to claim 11 wherein said soluble A $\beta$  pro-inflammatory pathway regulator is MK-886.

13. The pharmaceutical composition according to claim 6, wherein said soluble A $\beta$  pro-inflammatory pathway regulator is MAP kinase inhibitor. Selected from the group consisting essentially of p38MAP kinase inhibitors and MEK1/2 inhibitors.

14. The pharmaceutical composition according to claim 6, wherein said soluble A $\beta$  pro-inflammatory pathway regulator blocks the activity of enzymes of both the LOX and COX families.

15. The pharmaceutical composition according to claim 14, wherein said soluble A $\beta$  pro-inflammatory pathway regulator is one from the group consisting essentially of

ER-34122, BW-A4C or MK-886 in combination with non-toxic derivatives of NS-398.

16. A diagnostic method including the steps of detecting modification of the soluble A $\beta$  pro-inflammatory pathway.

17. The diagnostic method according to claim 16, wherein said detecting step further includes detecting any up-regulation of the soluble A $\beta$  pro-inflammatory pathway.

18. The diagnostic method according to claim 16, wherein said detecting step further includes detecting any down-regulation of the soluble A $\beta$  pro-inflammatory pathway.

19. A method of modifying inflammatory reactions in microglia and neurons by regulating a soluble A $\beta$  pro-inflammatory pathway.

20. The method according to claim 19, further defined as upregulating the soluble A $\beta$  pro-inflammatory pathway.

21. The method according to claim 19, further defined as down-regulating the soluble A $\beta$  pro-inflammatory pathway.